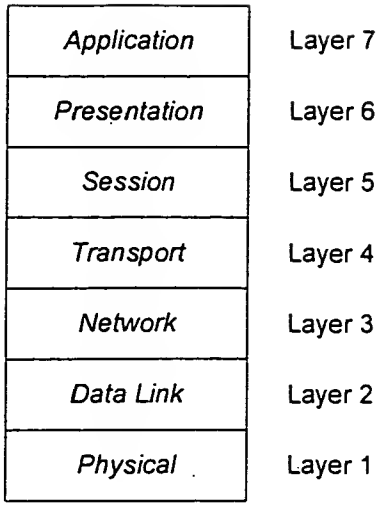

Fig. 1 a

CONVENTIONAL ART

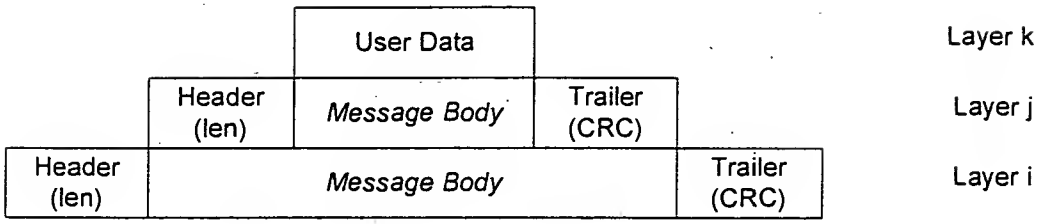

Fig. 1 b

CONVENTIONAL ART

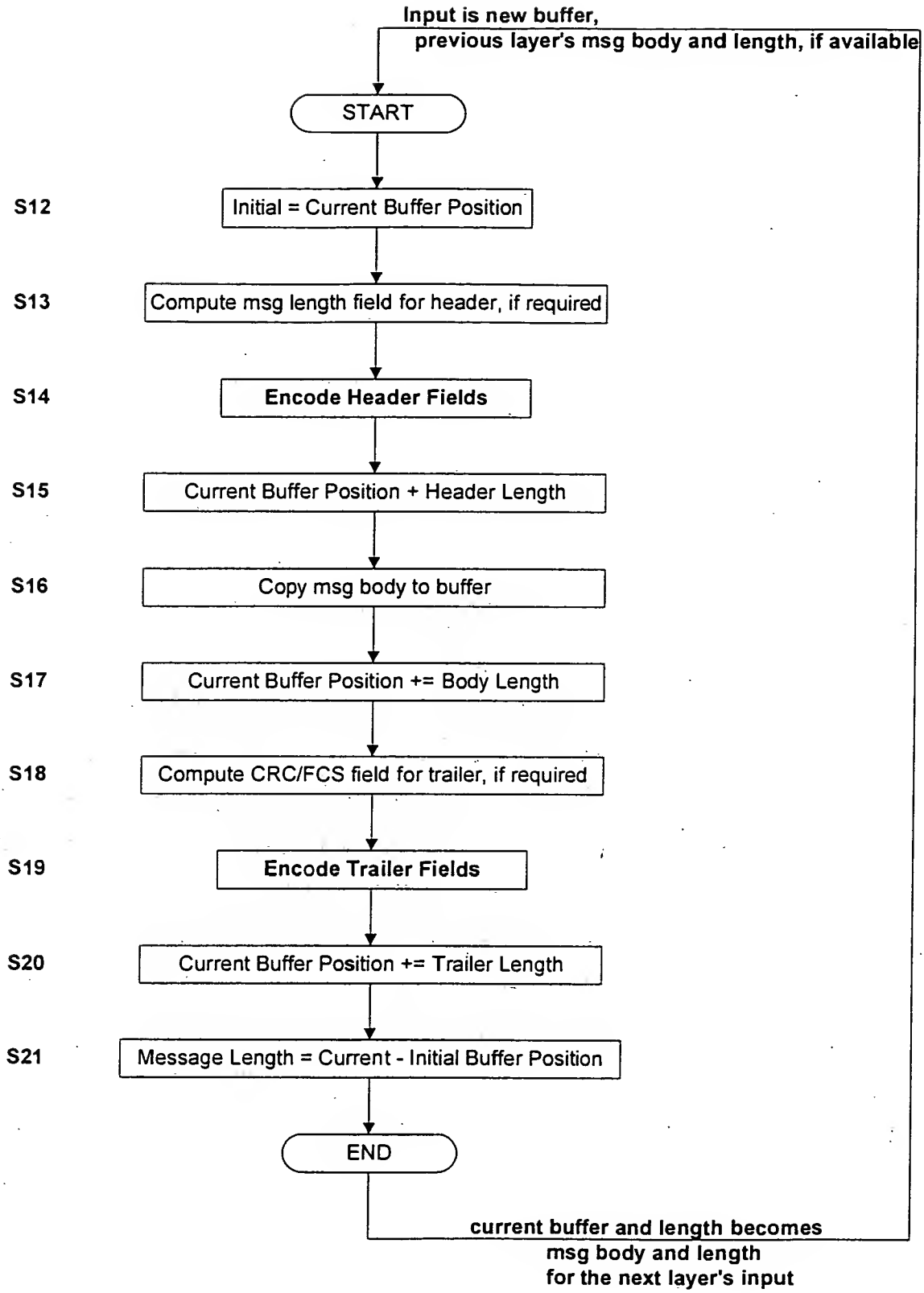

Fig. 2

Conventional Art

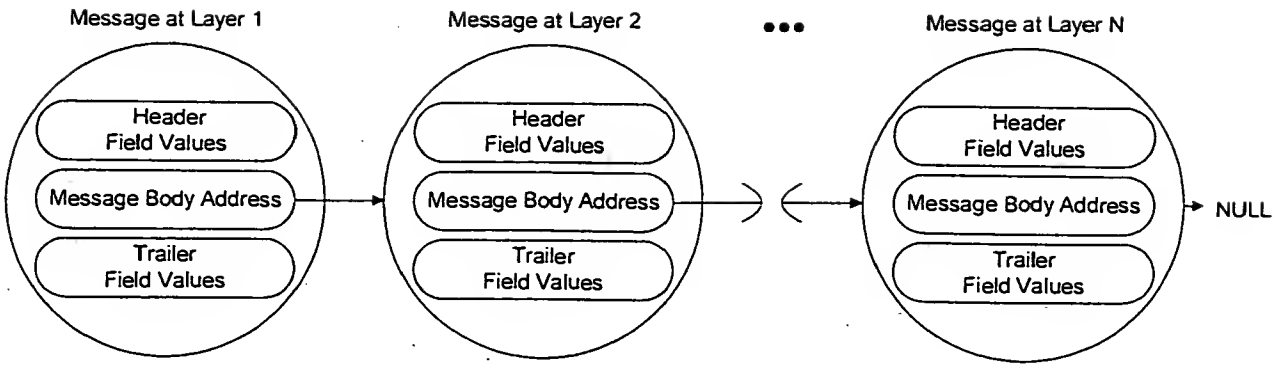
Message at Layer 1
Header
Field Values
Message Body Address
Trailer
Field Values
Message at Layer 2
Header
Field Values
Message Body Address
Trailer
Field Values
Message at Layer N
Header
Field Values
Message Body Address
Trailer
Field Values
NULL

Fig. 3

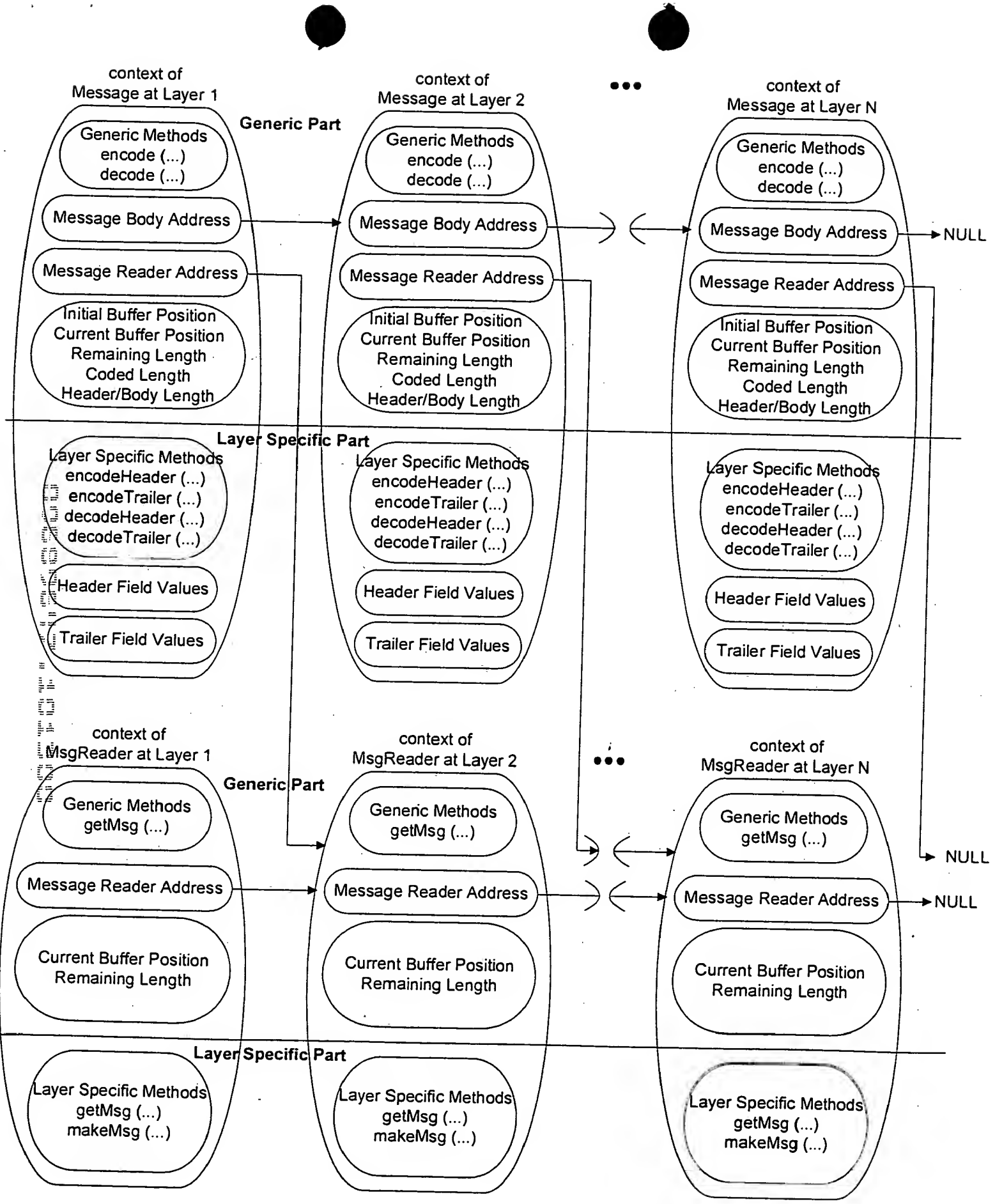
context of Message at Layer 1
Generic Part
Generic Methods encode (...) decode (...)
Message Body Address
Message Reader Address
Initial Buffer Position
Current Buffer Position
Remaining Length
Coded Length
Header/Body Length
Layer Specific Part
Layer Specific Methods encodeHeader (...) encodeTrailer (...) decodeHeader (...) decodeTrailer (...)
Header Field Values
Trailer Field Values
context of Message at Layer 2
Generic Methods encode (...) decode (...)
Message Body Address
Message Reader Address
Initial Buffer Position
Current Buffer Position
Remaining Length
Coded Length
Header/Body Length
Layer Specific Methods encodeHeader (...) encodeTrailer (...) decodeHeader (...) decodeTrailer (...)
Header Field Values
Trailer Field Values
context of Message at Layer N
Generic Methods encode (...) decode (...)
Message Body Address
NULL
Message Reader Address
Initial Buffer Position
Current Buffer Position
Remaining Length
Coded Length
Header/Body Length
Layer Specific Methods encodeHeader (...) encodeTrailer (...) decodeHeader (...) decodeTrailer (...)
Header Field Values
Trailer Field Values
context of MsgReader at Layer 1
Generic Part
Generic Methods getMsg (...)
Message Reader Address
Current Buffer Position
Remaining Length
Layer Specific Part
Layer Specific Methods getMsg (...) makeMsg (...)
context of MsgReader at Layer 2
Generic Methods getMsg (...)
Message Reader Address
Current Buffer Position
Remaining Length
Layer Specific Methods getMsg (...) makeMsg (...)
context of MsgReader at Layer N
Generic Methods getMsg (...)
NULL
Message Reader Address
NULL
Current Buffer Position
Remaining Length
Layer Specific Methods getMsg (...) makeMsg (...)

Fig. 4

Encode Scenario

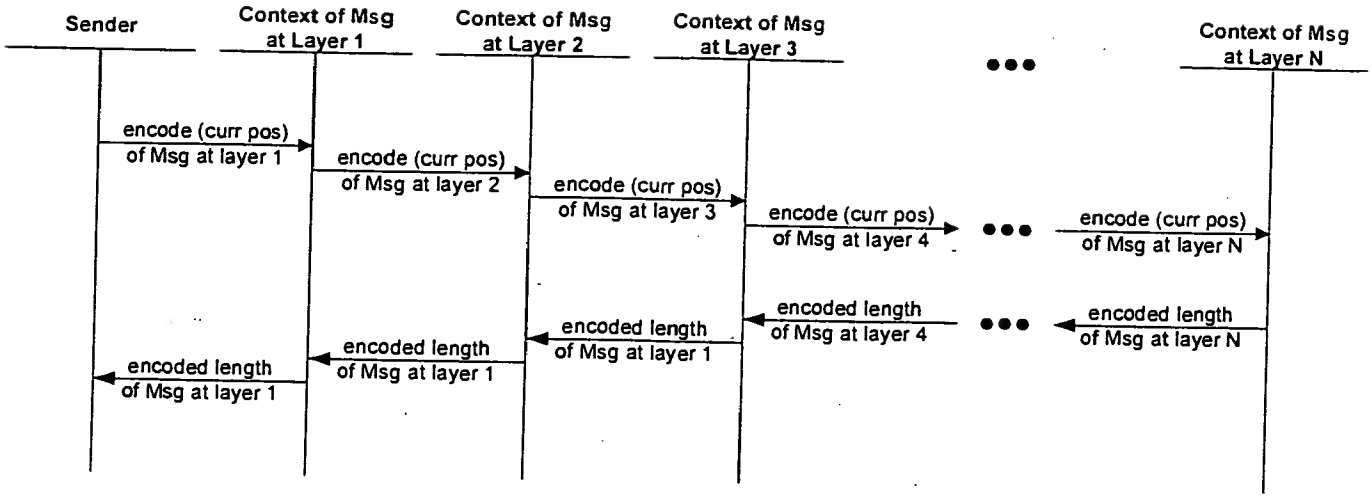

Fig. 5 a

Decode Scenario

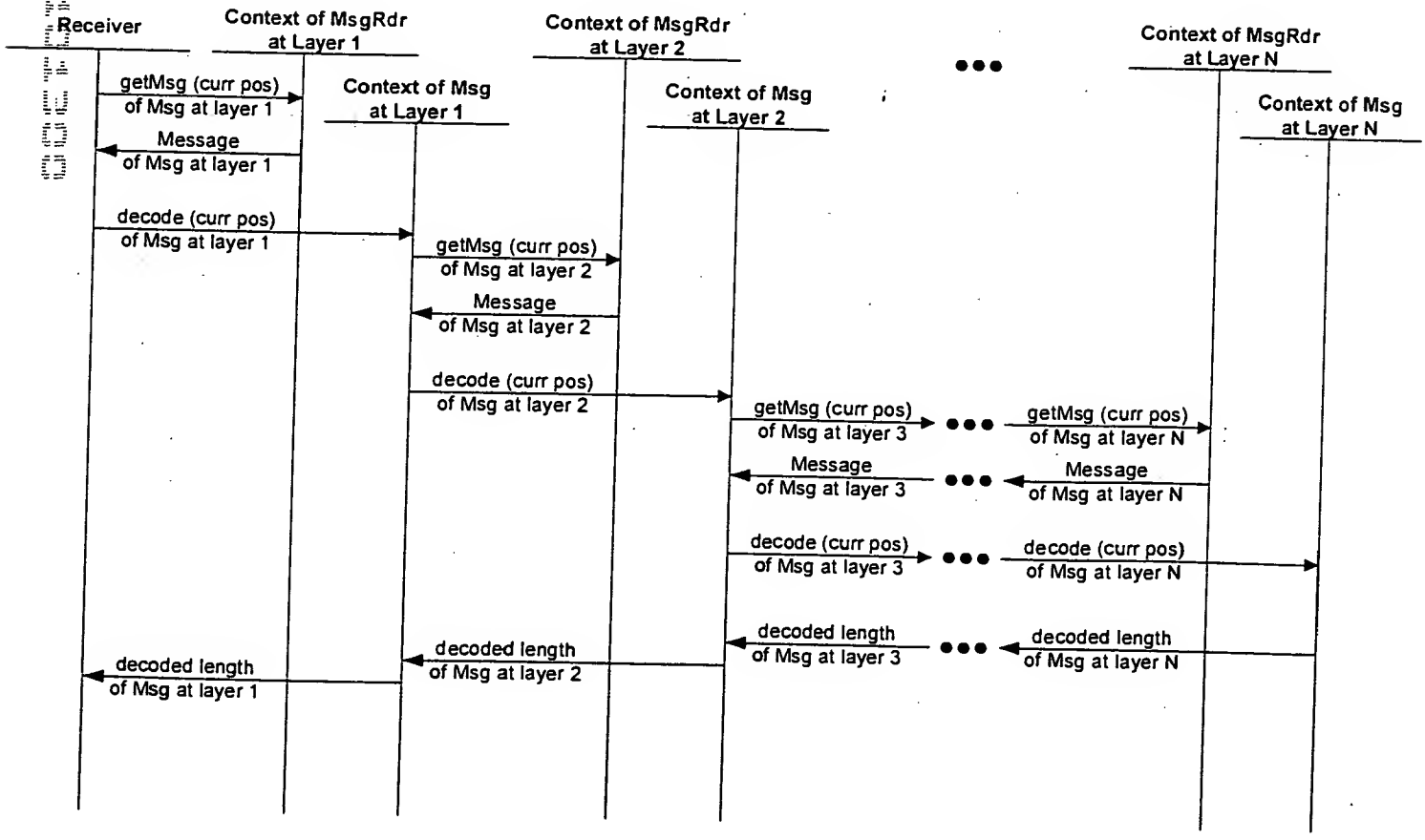

Fig. 5 b

Message Encode

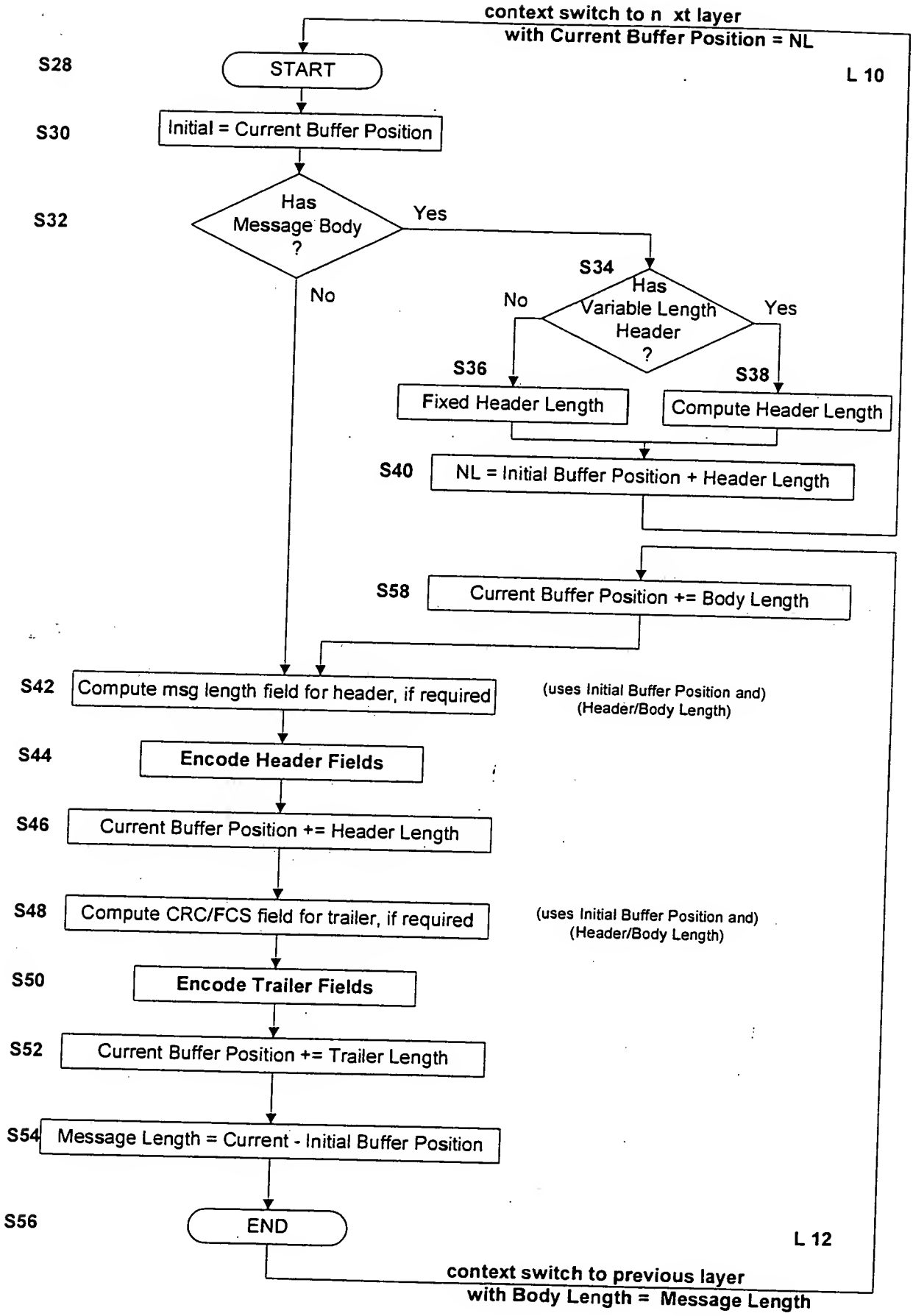

Fig. 6

Message Decode

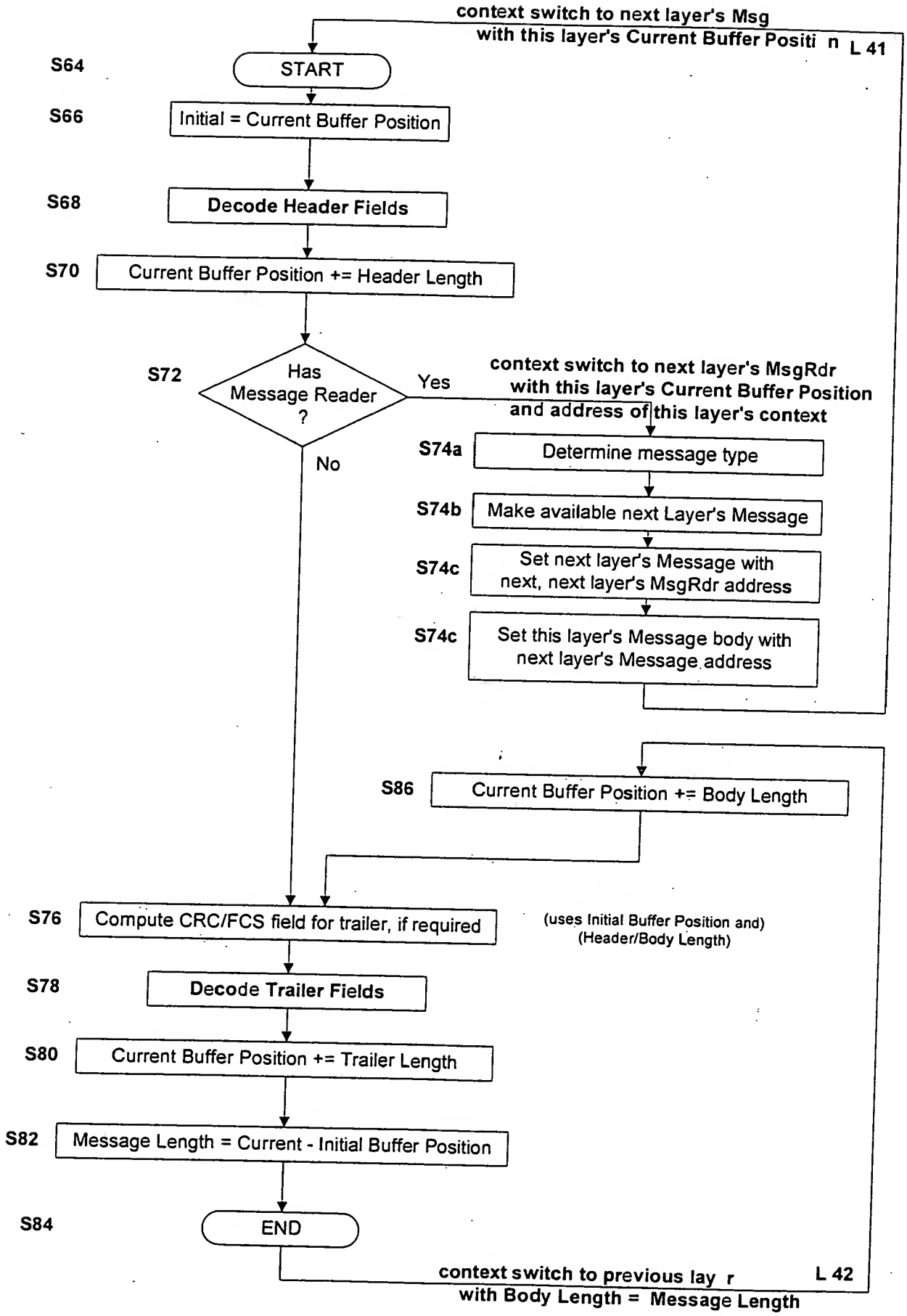

Fig. 7